



AR-NAFAKA Project Post-harvest Component: 2016-2017 Progress



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Outline

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Introduction

Post-harvest food loss is a challenge that contributes to food insecurity and reduces the income of millions of smallholder farmers.

Despite the availability of improved harvesting, processing and storage technologies there is lack of knowledge and limited access to these improved technologies.

Objective of postharvest management's business case for scaling

Introduce and promote post-harvest management technologies for maize and legumes to reduce losses and bring quality up to market standards.



Key Activities

- Situation and context analysis for targeting technology and proper scaling
 - Relevant location-specific technologies for scaling: identifying the most critical postharvest loss issues in each location.
 - Understanding location-specific nutrition practices: to pinpoint inadequacies and for targeting our nutrition training.



- Mapping of food fortification practices and their effectiveness to develop new approaches for enhancing nutrition & to better target the training of potential fortification practitioners.
- Understanding the adequacy of marketing practices (handling, storage) for fortified maize flour to provide proper advice to marketers.
- Monitoring technology spread, adaptation and the constraints (access to machine spare parts, suppliers of new storage bags, etc.).



Training

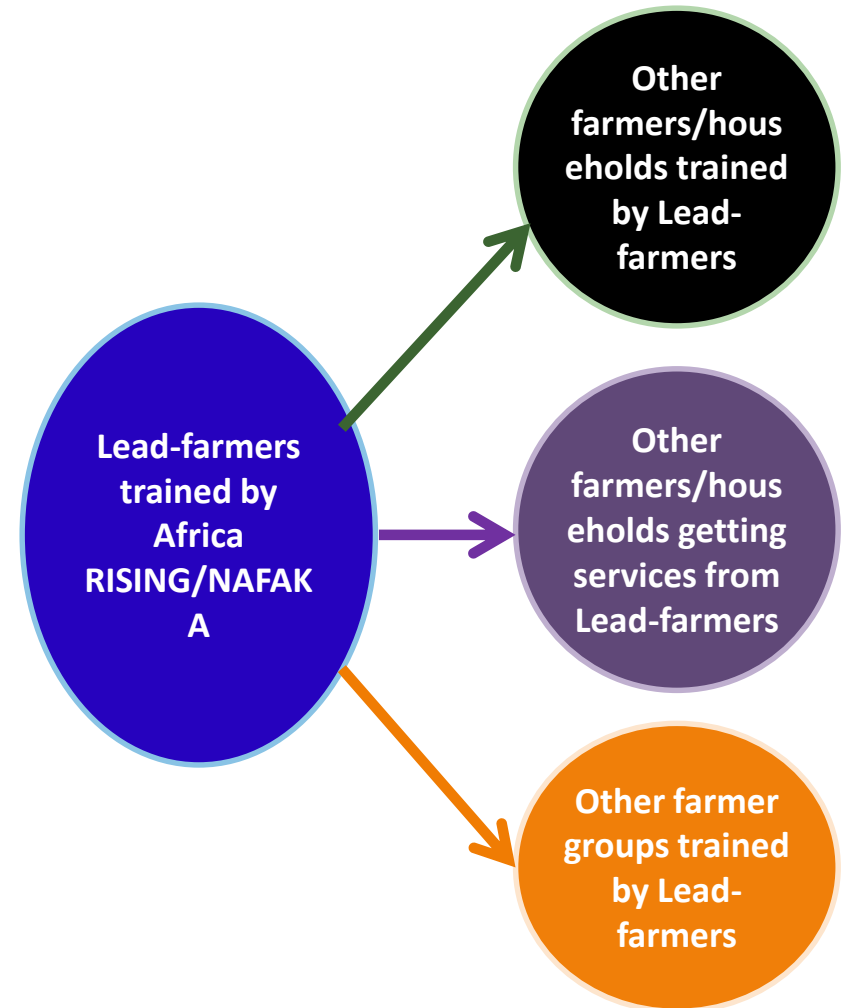
- Training of Lead-Farmers
Focused on crop handling and storage to retain food quality and quantity up to the time of marketing and consumption.
- Technologies:
 - Mechanized shelling: reduce labour input
 - Improved drying materials: effective storage;
 - Hermetic storage technique: eliminate storage insects





Scaling Approach:

- In each village, the trained lead-farmers were provided:
 - Motorized shelling machine (1.5MT/hour);
 - Electric shelling machine (0.5MT/hour);
 - One collapsible drier case;
 - Hermetic storage bags





Training of Maize Millers

- Objectives:
 - To enable compliance with good manufacturing practice for food fortification.
 - Efficient use of Dosifier and Microfeeder.
 - Link the processors to the suppliers of equipments and fortificants (SANKU FORTIFICATION).





- Increase the nutrient density of maize flour available to the public.
- Increase food safety.
- Create market demand for the fortified food products.





Training of community nutrition officers

- To enhance local capacity for delivering nutrition services
 - To provide adequate support to child nutrition
 - Improve household consumption of nutrient–dense foods





Artisans training

- Objectives:
 - Equip local ‘fundis’ the knowledge to provide maintenance services to the farmers and other users of the machines.
 - To link the farmers’ groups and local artisans to the equipment supplier for more effective after sale service in the project locations.





Introduce warehouse storage practices

- To establish a platform in which more farmers would learn the effectiveness and observe the benefits of improved postharvest storage methods.
- A short video of farmers examining the quality of maize after 6 month storage (available with Africa RISING communication team)





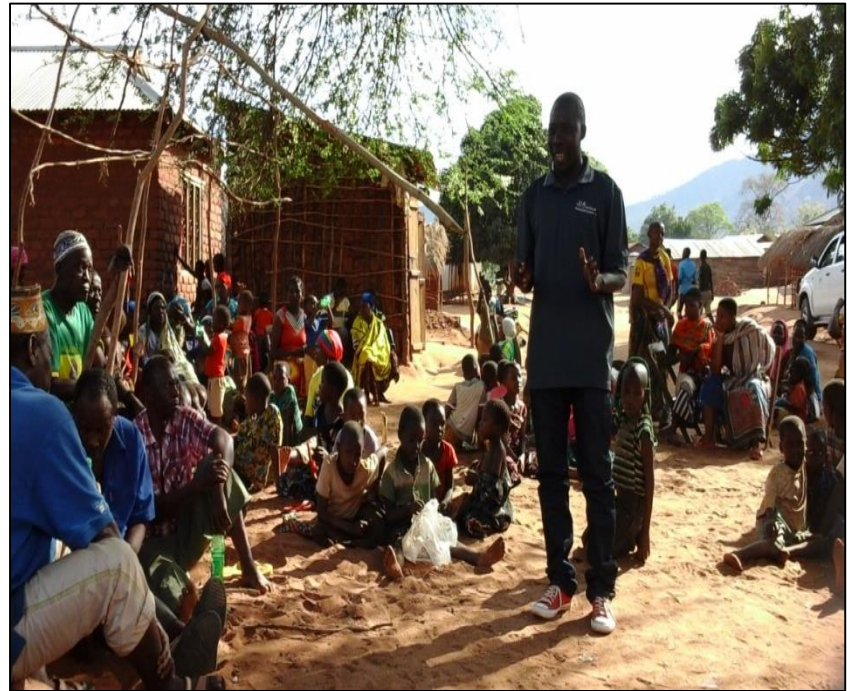
Agricultural exhibitions and sensitization meetings

- An annual event to promote agricultural interventions by the wider farming community in Tanzania.
- To showcase the postharvest technologies being promoted under the project.
- To get more farmers and other stakeholders exposed to the technologies.





- Sensitization meetings in newly selected villages
- To introduce the project and its objectives to the farmers and other stakeholders.
- To create awareness and prepare the farmers for the next season's postharvest activities.





Strategy Planning meetings with Partners

- NAFKA:
 - New scaling strategies for improved postharvest technologies.
 - Ensure the sustainability of supply and use of the technologies in the project locations (through VBAA).

- A to Z Textile Mills Ltd:
 - Establish new supply channels for hermetic storage bags

- Poly machinery:
 - Strengthen network of distributors of machines & spare parts
 - Ensure after-sale services and support to local fundis



Postharvest Management and Nutrition Manuals:

- Postharvest management manuals focus on improved handling technologies for maize and legumes.
- Topics:
 - Harvesting,
 - Drying, and Threshing/Shelling,
 - Storage practices & losses,
 - Storage facilities
 - Pillars of good storage





- Nutrition manuals were developed to provide guidelines on how to deliver nutrition services to the target groups
 - A recipe book on utilization of available locally produced crops for making nutrient-dense foods for good nutrition was developed.
- Target group: Children aged 6-9 months, 10-12 months, 1-2 years, lactating mothers and the elderly.





Targets and number reached

Indicator	2014/2015		2015/2016		2016/2017	
	Target	Achieved	Target	Achieved	Target	Achieved
Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	625	221	700	822		
Number of individuals who have received USG supported short-term agricultural sector productivity or food security training			430	652	4,000	182
Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance			10	16	30	47
Number of rural households benefiting directly from USG interventions	775	255	300	260	2,500	809



Key Results

- Labour saving technologies, improved drying facilities and hermetic storage bags are widely used by the farmers, helping to reduce food losses and labour inputs by women.
- Nutrition service providers are currently helping households to increase child nutrition through increased consumption of nutrient-dense foods.
- Households in some project areas have increased access to mineral- and vitamin-fortified maize flour.



Partners & roles

- NAFAKA: Implementation
- Local Government Authorities: Farmers organization, logistics, extension services
- Poly Machinery: Supply of machines/spare parts and support for maintenance and repair services
- TRUE FOOD: Training and technology dissemination
- TUBOCHA: Training of Millers
- Center for Counseling, Nutrition and Health Care (COUNSENUTH): Nutrition skills and knowledge
- A to Z Textile Mills Limited: Establishing new channels for supply of hermetic storage bags to the farmers
- Pee Pee (T) Ltd – PICS bag manufacturer: Strengthen hermetic storage bags supply chain



Challenges and constraints

- Lack of local artisans who are technically proficient to do simple maintenance of the machines (2015)
 - Training of local artisans was done to sustain the use of the machines, improve scaling and increase adoption (2017)
- The closure of TUBOCHA project after Year 1 of the partnership project slowed down progress for a very short period.
 - The challenge was resolved by working with nutrition experts as partners or consultants



Lessons Learned

- Approaches that worked for scaling of postharvest technologies
 - Introducing improved technologies to champions and early adapters - who are ready to use the technologies (e.g. store maize using hermetic storage bags for at least 6 months);
 - Availability of after-sales services are key to machine adoption by the smallholders.
 - Group storage with emphasis on community warehouse storage helps to increase financial benefits and attract more farmers.



Exit Actions

- Working with the suppliers and distributors of machines, storage bags (e.g. Poly Machinery & A to Z) so as enable them continue providing the postharvest handling materials and services.
- Working with local extension officer and other projects (e.g. PICS3) so as to sustain the use of postharvest technologies Africa RISING introduced to the project locations.



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